

The diagram illustrates the internal architecture of a host apparatus 28, which interfaces with a disk drive 1. The host apparatus includes a Head signal processor 22, a Synchronous clock generator 23, and a Signal processor 24. The Signal processor 24 is connected to a CPU 25, which in turn controls an Inertia determiner 26. The CPU 25 also manages a Temperature calculator 20, a Commanded current value generator 18, and a Current controller 19. The Current controller 19 is connected to a Motor controller 21, which drives a Motor driver 17. The Motor driver 17 is connected to the disk drive 1. The disk drive 1 includes a head 5, a disk 6, and a spindle motor 7. The host apparatus also includes a Movement distance indicating device 10, which is connected to a Waveform rectifier 12. The Waveform rectifier 12 outputs a signal N(n) to a Speed calculator 13, which calculates the speed N'(n) using the formula $N'(n) = (N(n) + (m-1) \cdot N'(n-1)) / m$. The Speed calculator 13 is connected to a Differential calculator 14, which calculates the acceleration A(i) using the formula $A(i) = (N'(i) - N'(i-1)) / \Delta t(i)$. The Differential calculator 14 is connected to a Heat quantity calculator 16, which calculates the heat quantity E(i) using the formula $E(i) = A(i) \cdot \Delta t(i)$. The Heat quantity calculator 16 is connected to a Timer 11, which outputs a signal $\Delta t(k)$ to the Heat quantity calculator 16. The Timer 11 is also connected to an Acceleration detector 15, which outputs a signal $\Delta t(k)$ to the Heat quantity calculator 16. The Heat quantity calculator 16 is connected to the CPU 25. The CPU 25 is also connected to a Host apparatus 28.

FIG. 2

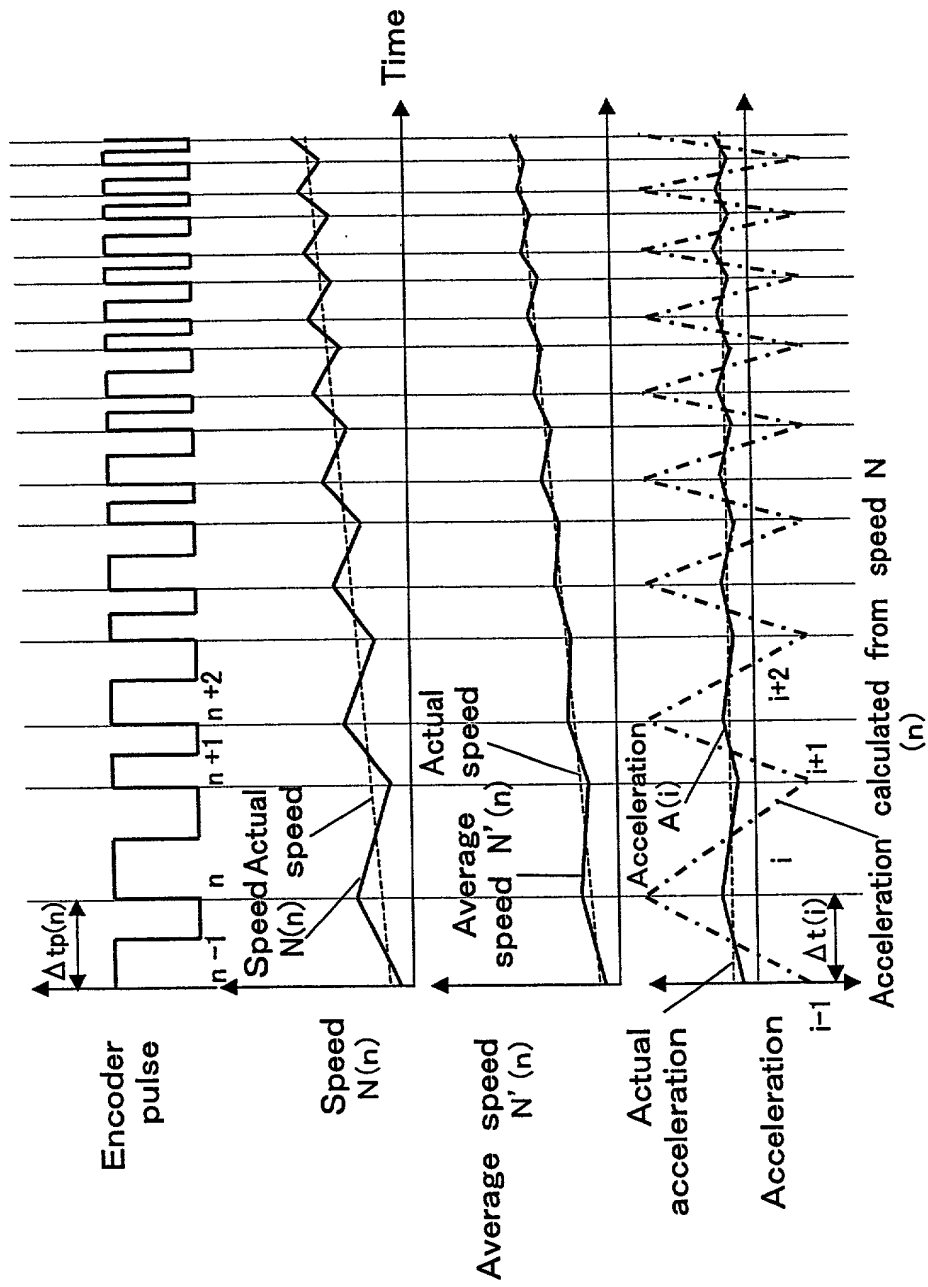


FIG. 3

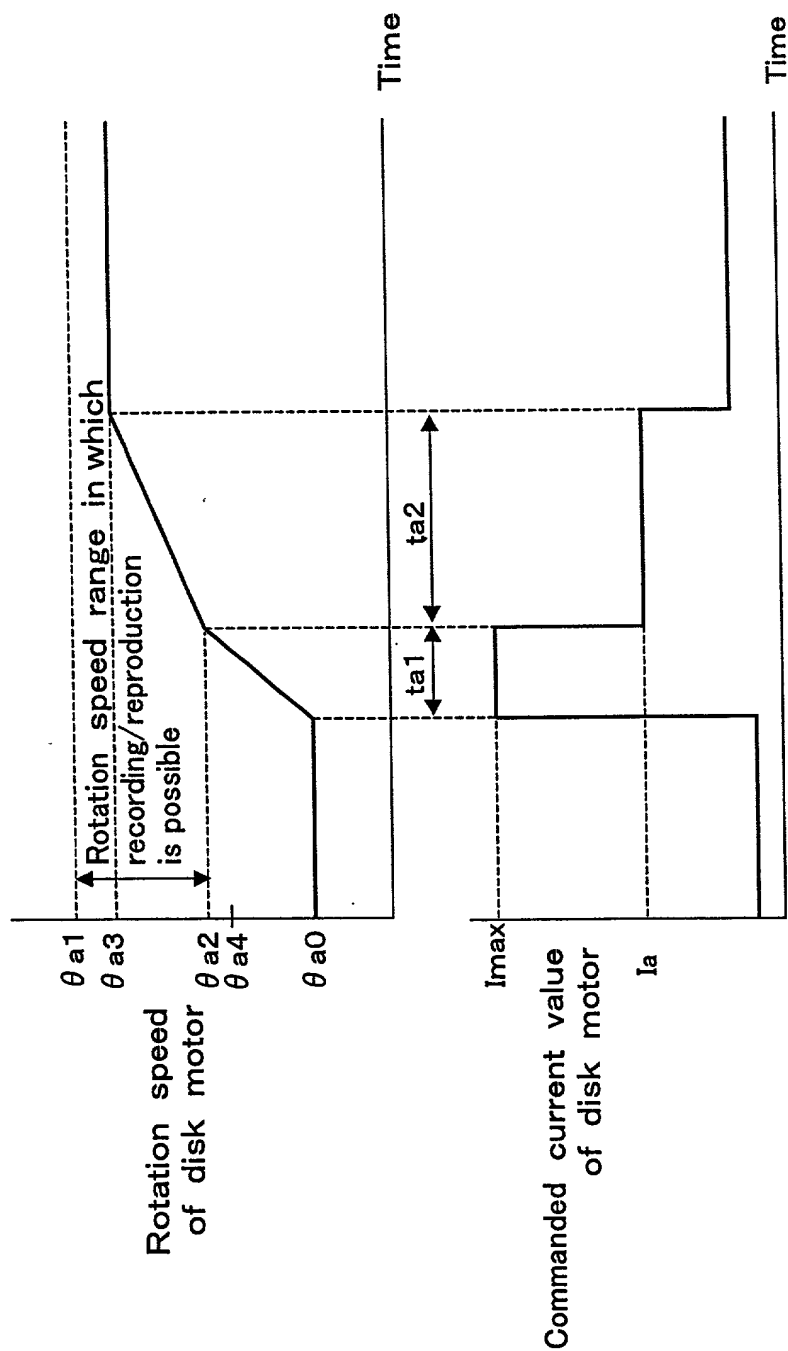


FIG. 4

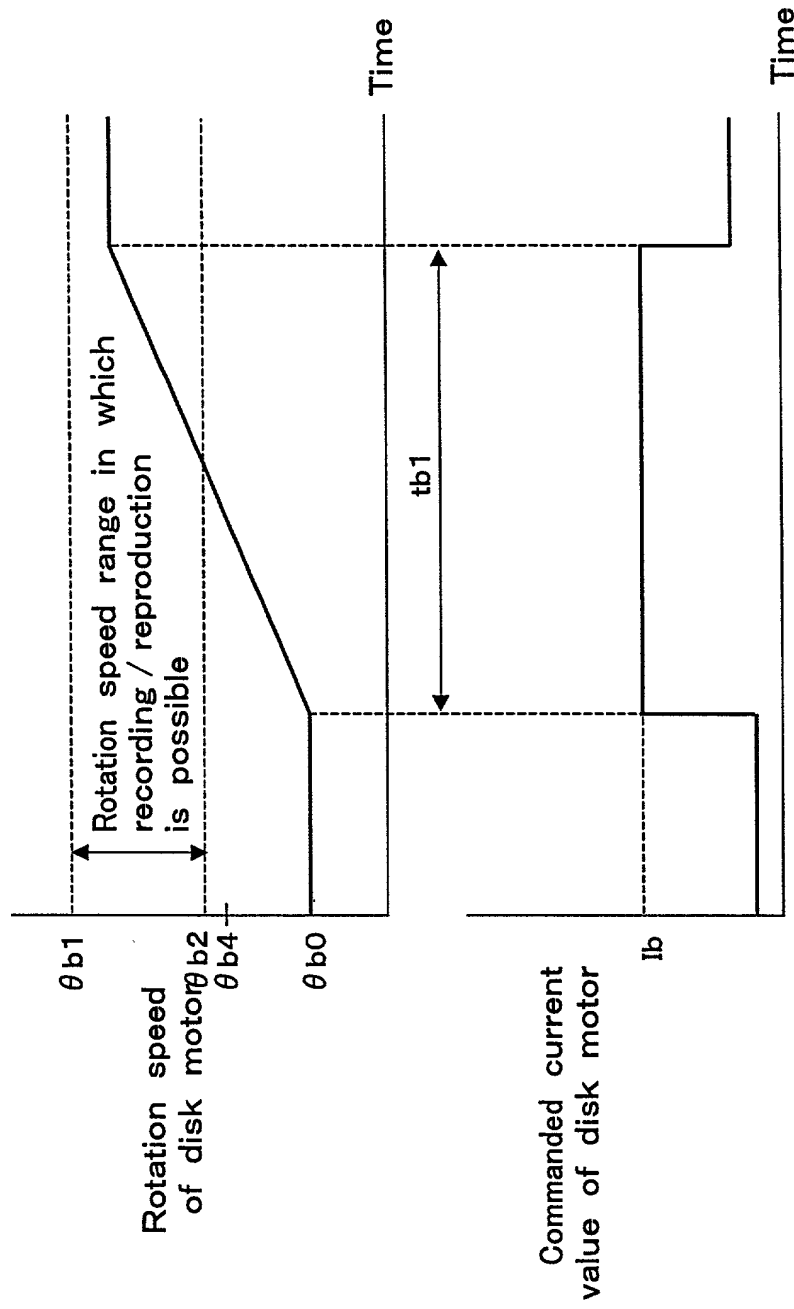


FIG. 5

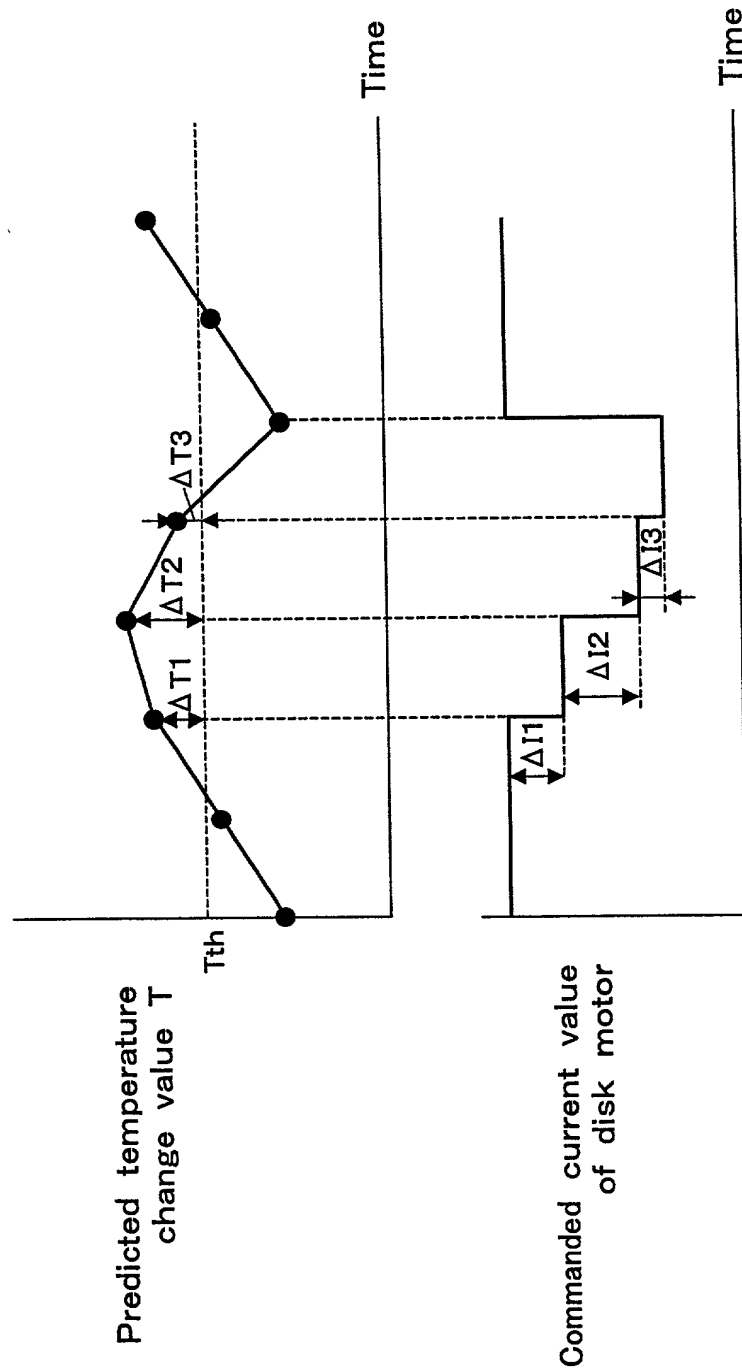
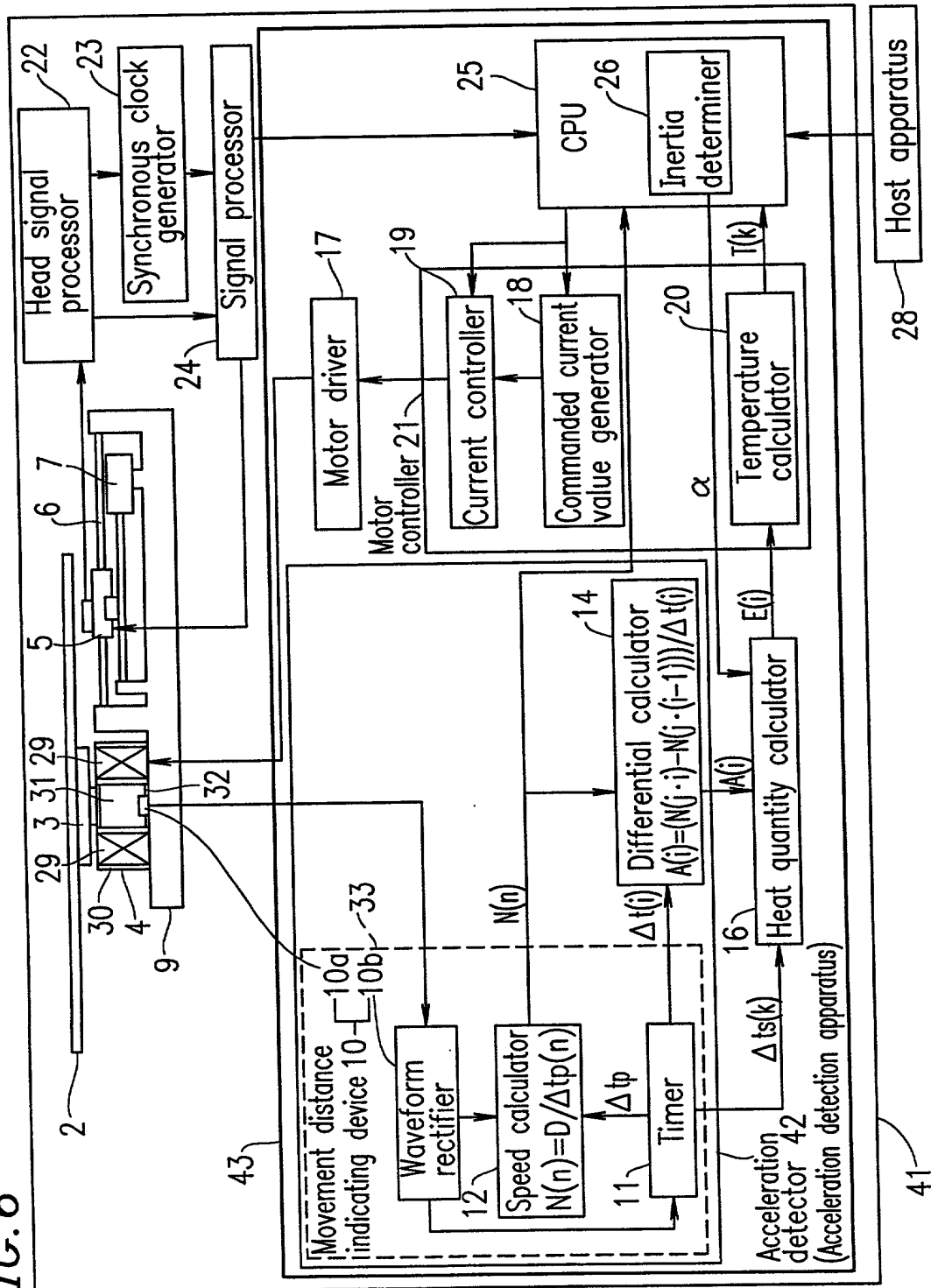


FIG. 6



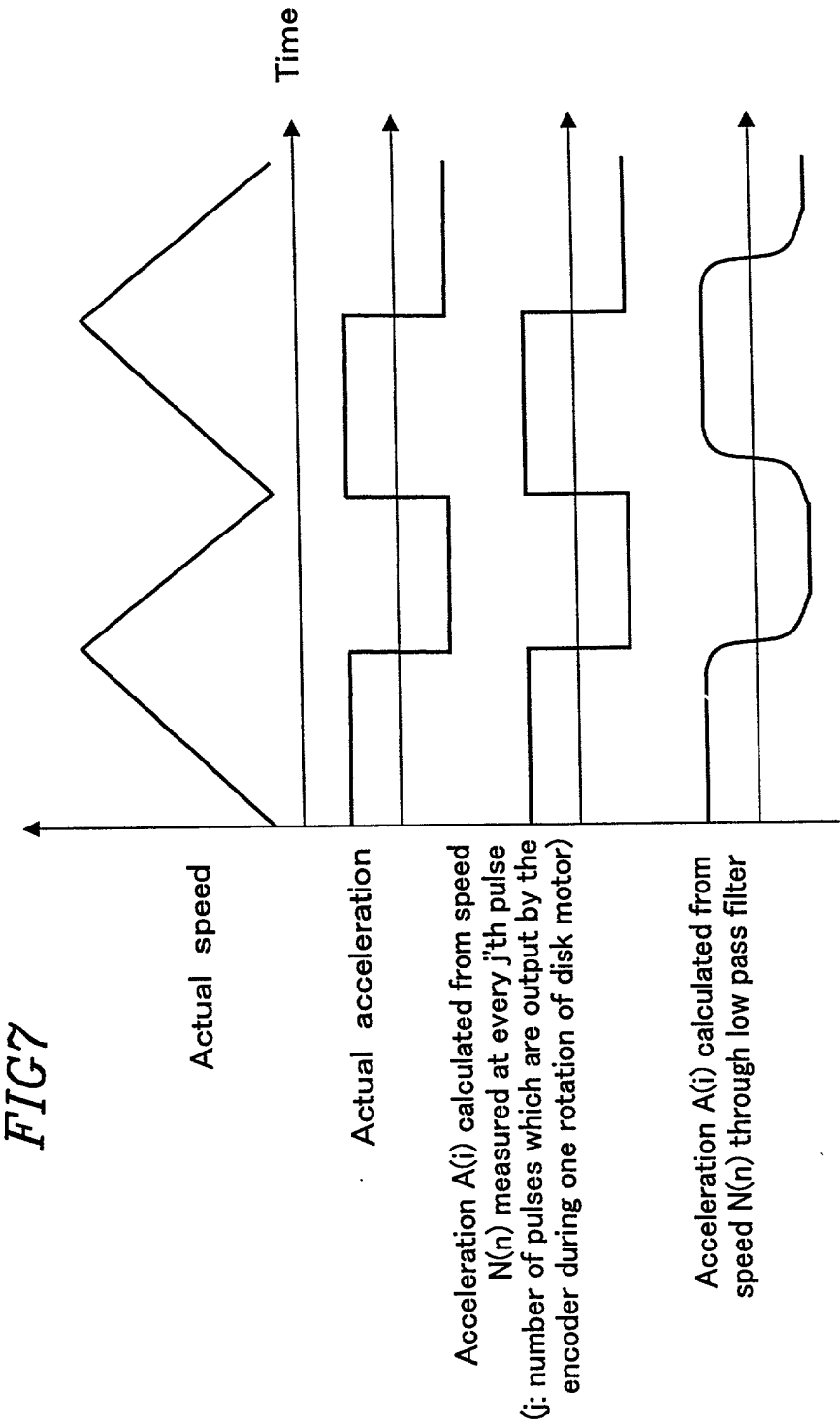


FIG. 8

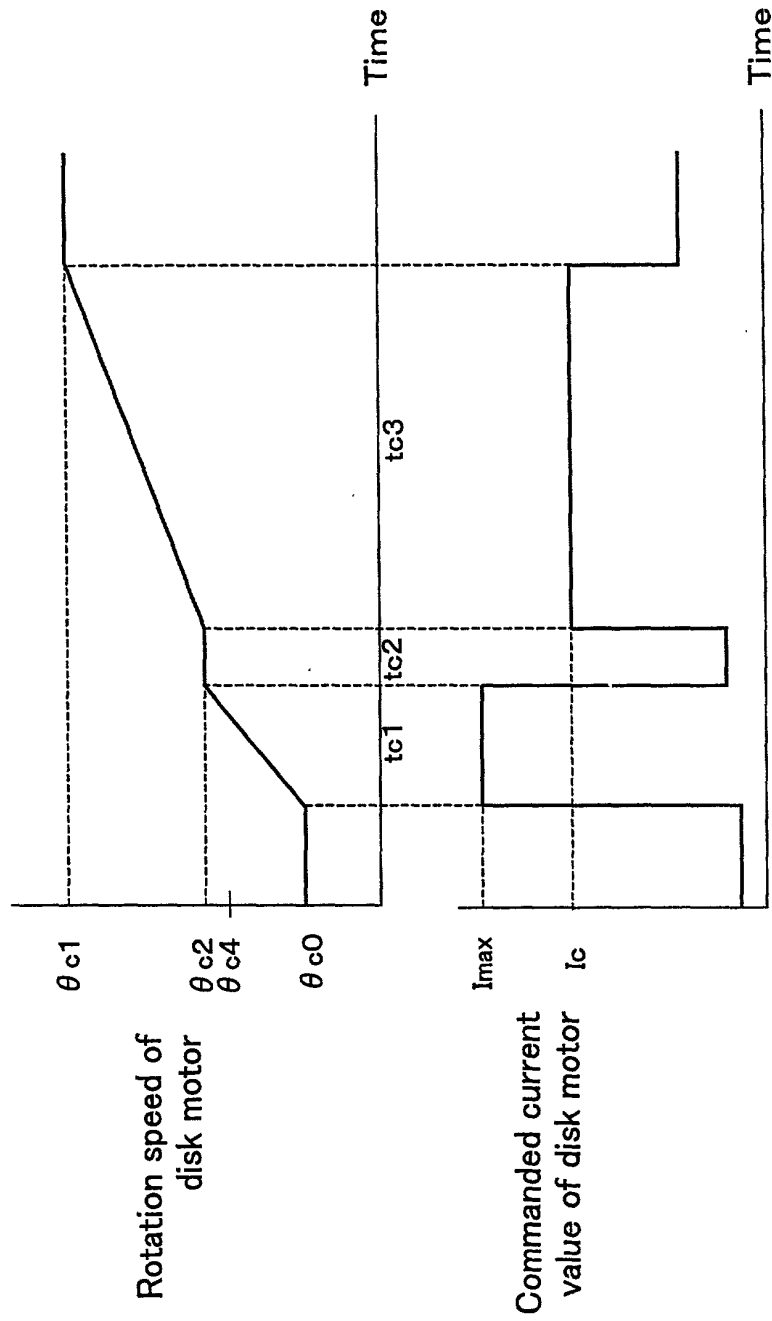


FIG. 9

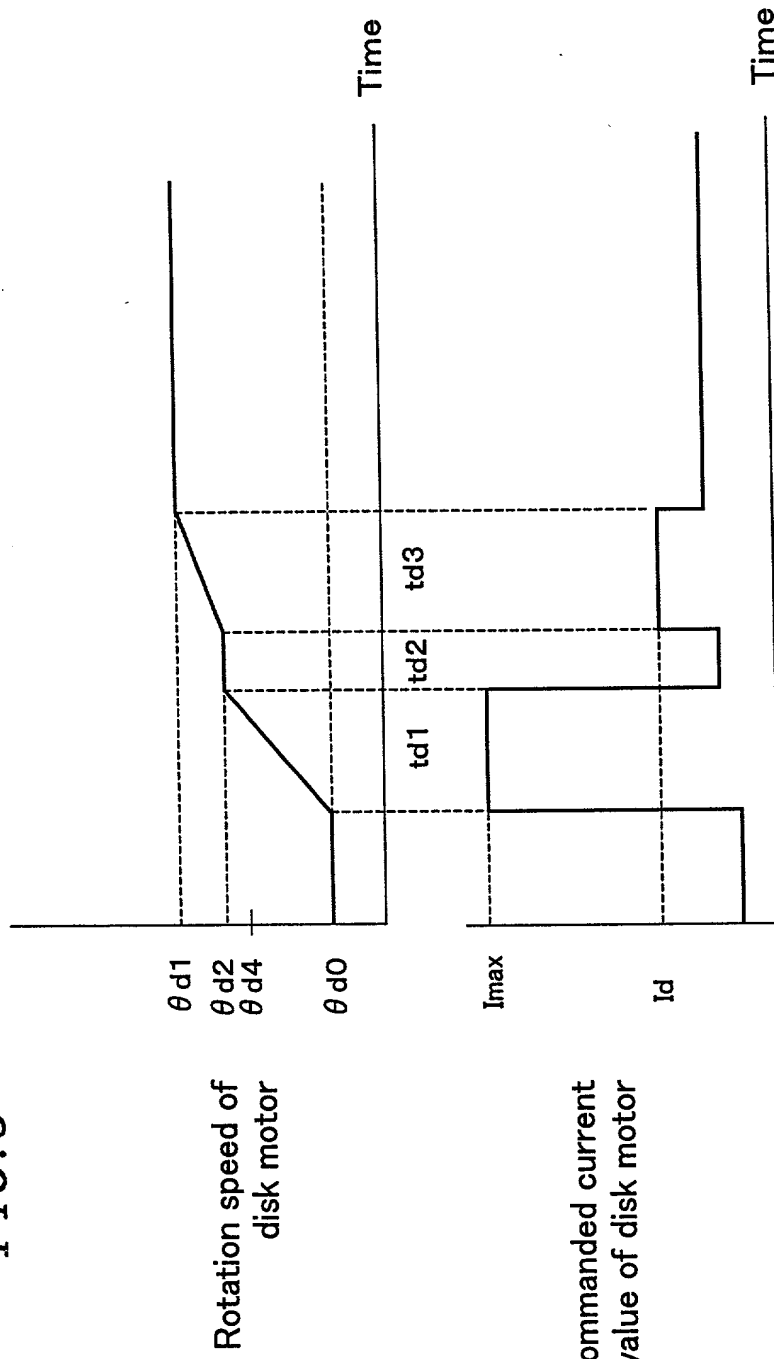


FIG. 10

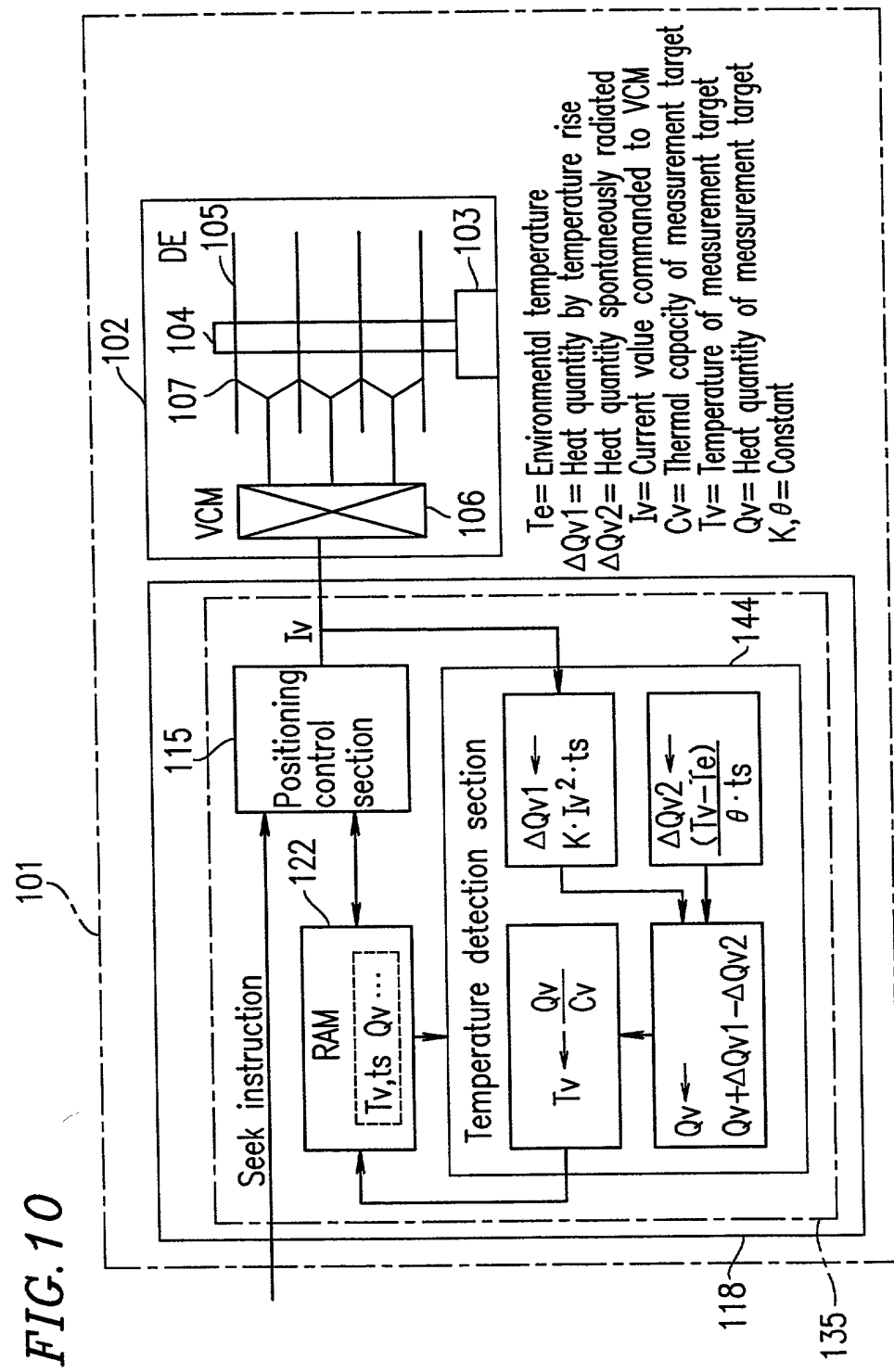


FIG. 11

